

### **REMARKS**

Claims 3, 6, 9-10, and 81-83 are amended, claim 1 is canceled, and no claims are added; as a result, claims 3, 9-13, 15-17, 23-30, 48-54, 57-58, and 81-85 are now pending in this application.

No new matter has been added by the amendments to claims 3, 6, 9-10, and 81-83.

Claims 3, 6, and 81-82 have been amended to change the dependency of these claims from now canceled claim 1 to claim 9. Claim 3 has been further amended merely to delete the word "layers" and add the word "layer" following the phrase "first metal" in the claim. Claims 9 and 83 have each been re-written in independent form to include all of the subject matter of now canceled independent claim 1, and to clarify the language in these claims to overcome the objection raised in the Final Office Action regarding claim 1.

#### **Allowed and Allowable Subject Matter**

##### **Claims 10-13, 15-17, 23-30, 48-54, and 57-58.**

Claims 10-13, 15-17, 23-30, 48-54, and 57-58 were allowed. Applicant respectfully acknowledges the allowance of claims 10-13, 15-17, 23-30, 48-54, and 57-58.

##### **Claims 9 and 81-85.**

Claims 9 and 81-85 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 9 has been re-written in independent form to include all of the limitations of the base claim (now canceled claim 1) and any intervening claims. In addition, claim 9 has been amended as further noted below to overcome the claim objection raised in the Final Office Action regarding claim 1. Therefore, Applicant respectfully submits that claim 9 is now allowable.

Claims 81-82 have been amended to depend from re-written and now independent claim 9, and for at least the reasons stated above with respect to independent claim 9, are also allowable.

Claim 83 has been re-written in independent form to include all of the limitations of the base claim (now canceled claim 1) and any intervening claims. In addition, claim 83 has been amended as further noted below to overcomes the claim objection raised in the Final Office Action regarding claim 1. Therefore, Applicant respectfully submits that claim 83 is now allowable.

Claims 84-85 depend from re-written and now independent claim 83, and for at least the reasons stated above with respect to claim 83, are also allowable.

Applicant respectfully requests reconsideration and allowance of claims 9 and 81-85.

*Claim Objections*

*Claims 1 and 10.*

Claims 1 and 10 were objected to because of informalities. Specifically, the Final Office Action states:

"the depth being a substantially same depth that is less than the final thickness and greater than a critical depth across the width of the trench is unclear."

Claim 1 is canceled, so the objection to claim 1 is moot.

Claim 10, as now amended, recites:

**the interconnect having an insulating layer having a top surface and a final thickness and a trench in the insulating layer, the trench having a width and a depth across the width of the trench, the depth being a substantially same depth across the width of the trench, the depth being less than the final thickness and greater than a critical depth across the width of the trench, wherein the critical depth includes a vertical thickness of a first barrier layer and a vertical thickness of a seed layer and a vertical thickness of a first metal layer and a vertical thickness of a second barrier layer.** (Emphasis added).

Applicant respectfully submits that these amendments to claim 10 clarify the language of the claim and overcome the objection to claim 10.

Further, the language of claims 9 and 83, as was previously included in now canceled claim 1, has been amended to overcome the objection raised in the Final Office Action concerning claim 1. Thus, the amendments to claims 9 and 83, which include the subject matter

of now canceled claim 1, also overcomes any claim objections related to claims 9 and 83 that are based on the claim objection in the Final Office Action related to claim 1.

In addition, the Final Office Action states, "Layers" in claim 3 should be 'layer.' Claim 3 has been amended to delete the word "layers" and to add the word "layer" in the claim.

Applicant respectfully submits that these amendments overcome the claim objection to claim 3.

Applicants respectfully request withdrawal of the claim objections, and allowance of claim 9-10, 83, and 3.

*§103 Rejection of the Claims*

Claims 1, 3, and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chopra (U.S. 6,413,858) in view of Uzoh (U.S. 6,258,707).

Claim 1 is canceled, so the rejection of claim 1 is moot.

As noted above, claims 3 and 6 have been amended to depend from independent claim 9. Claim 9 is allowable for at least the reasons stated above, and therefore claims 3 and 6 are also allowable for at least the reasons stated above with respect to independent claim 9.

Applicant respectfully requests reconsideration and withdrawal of the rejection, and allowance of all claims now pending in the application.

*Reservation of Rights*

In the interest of clarity and brevity, Applicant may not have equally addressed every assertion made in the Final Office Action, however, this does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official

Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 349-9587 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: MS AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 21st day of January 2008.

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Signature

